

Confidential Claim Retracted

AUTHORIZED BY:

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FORMAT FOR UNIT RESOURCE ANALYSIS

I. General Information

Title Page

Completion and Revision Checklist

Location Map (w/i New Mexico)

Narrative on 5 res. categories (identify data sources)

Ecological Profile

Base Map (1 or sections)

Overlays: include fringe boundary of at least 1 mile outside
res. to show adj. development

- o Physical Profile (1 for each sec)
- o Pres. sit. for each res. (1 for each sec.)
- o Ecological profile (1 for each sec.)
- o Dev. opport. (1 for each sec.)

II. Physical Profile - reservation baseline characteristics

- A. Climate - temperature, humidity, precipitation, air movement
patterns
(Information sources: air pollution control agencies, local
weather bureaus, state climatologists, visual observation)
- B. Topography - General relief characteristics (canyons, mesas,
flatlands), elevational differences, major streams, slope
class.
- C. Geology and Soils
- D. Vegetation (forest types, range vegetation, cropland)
- E. Water Resources (surface and ground water) - Drainage patterns,
major runoff areas, location of aquifers, stream characteristics)
Information Sources: USGS Water Reconnaissance Series
- F. Animals (including domestic livestock)



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G. Limiting Physical Factors (factors affecting resource use or potential development)

- o Susceptibility to erosion
- o Physical factors
 - Areas of periodic or potentially severe flooding
 - Sandstorm areas
 - High wind areas
- o Hazard conditions
 - Mining areas (underground and surface)
 - Construction excavations and gravel pits
 - Dumps and junkyards
 - Abandoned buildings
 - Poisonous insects and reptiles
 - Nuclear waste disposal areas
- o Unpleasant sound areas
 - Working mines
 - Blasting areas
 - Heavily traveled roads

H. Development, facilities and services

- o Reclamation areas
- o Fences, cattleguards, corrals
- o Developed recreation sites
- o Communication facilities sites
- o Fuel and equipment storage areas.

I. Access

- o County and state roads
 - Paved
 - Gravel
 - Dirt
- o Railroads

III. Resource Data

A. Land - Present Situation

1. Land ownership and assignments
2. Current intensive land use
 - o Commercial
 - o Residential
 - o Educational/institutional
 - o Agriculture/grazing
 - o Utility systems (pipelines, power and telephone lines, etc.)
 - o Tribally significant areas
 - o Communication sites
 - o Mine areas
3. Land quality condition and trend - environmental problem areas
 - o Proliferating, uncontrolled road development
 - o Areas of indiscriminate dumping
 - o Unreclaimed strip mined areas (uranium, gravel, etc.)
 - o Abandoned structures

B. Land Management Opportunities

1. Identify areas for proposed residential expansion within 10 years. Show only outside perimeter of expansion areas.
2. Identify lands having potential for new residential, commercial and industrial (including mining) uses.
3. Identify sites for proposed tribal government facilities
4. Identify lands suitable for agricultural use. Describe possible future water supply sources.
5. Review utility companies' plans to determine route locations for future utility use.
6. Review transportation agency (state, other) plans to identify possible new road system proposals
7. Identify significant areas having potential as communication sites.
8. Evaluate potential actions that could be taken to correct, alleviate or control conditions identified as problem areas under A.3. above.
9. Identify water needs for each lands activity potential development (est. in gallons or acre-feet).

C. Minerals - Present Situation

1. Types of areas - map

- a. Identifies - economic reserves
- b. Identifies - subeconomic resources
 - o Paramarginal
 - o Submarginal
- c. Undiscovered resources (those surmised to exist on the basis of bread geologic knowledge and theory).
 - o Hypothetical
 - o Speculative

2. Mineral ownership - map

3. Mineral leases - map (available from BIA agency)

This map should include known geologic structures, known geothermal resource areas, known coal leasing areas and areas with production or pending leases.

4. Tabulations on existing production

a. Leasing statistics (by producer)

- 1) Acreage under lease
- 2) Minerals included in lease
- 3) Past receipts by year
- 4) Estimated receipts for latest fiscal year
 - o Royalties
 - o Rentals
 - o Bonuses
 - o Filing fees

b. Production statistics (by lease)

- 1) Past production by year
- 2) Estimated production for latest fiscal year

5. Narrative discussion on reservation mineral resources

- o Types of mineral areas (identified economic reserves, identified sub-economic reserves, undiscovered resources)
- o Geology, occurrence, known structures and qualification of reserves
- o Current activity, including exploration, new production, expansion of development, acreage involved

- o Access to sites - legal and physical access, problems
 - o Production trends
 - o Inventory of active mining or exploration companies and companies with pending proposals
 - o Water needs for development
 - o Reference sources used, including contacts and a bibliography of published sources
6. Identification of mineral development opportunities
- A. Energy resources based on above data, identify:
 - 1) Opportunities for development ranked by economic importance and tribal preference for development
 - 2) Opportunities for further identification of reserves
 - 3) Opportunities for protection - include reservation of land for non-development.
 - B. Non-energy resources (sand and gravel, stone, etc.)
 - 1) Opportunities for development
 - 2) Opportunities for further identification and qualification
 - 3) Opportunities for protection
 - C. Summary
 - o Discuss key factors or problems which prevent any deposit from being commercially valuable at present
 - o Discuss any lack of data which may be necessary to fully identify potentials (i.e., lack of exploration data)
 - o Discuss types of exploration necessary
 - o Discuss potential impacts on non-mineral deposit areas
 - o Discuss technology and market trends
 - o Discuss likely type of extraction method
 - o Discuss potential access and rights-of-way needs
 - o Discuss support needs such as land required for processing facilities, dump areas, water needs.

5. Forest Products Inventory

- a) Productive (commercial) forest land
- b) Non-productive (noncommercial) forest land
- c) Non-forest land.

Narrative

6. Range Management

- a) Vegetation
- b) Condition and trend
- c) Domestic livestock grazing
- d) Grazing land assignments
- e) Narrative discussion
 - Existing conflicts between grazing and mining, off-road vehicles, and other existing or proposed development.
 - Discuss other problems such as abundance of small allotments (i.e., assignments), changing in boundaries, changes in use or class of livestock, access, ownership and/or availability of water
- f) Range management opportunities
 - Identify feasible opportunities to increase vegetative production and range use, to improve range conditions for existing livestock. Consider both natural potential and potential through land treatment.

7. Watershed (Drainage Areas)

- a) Present situation in terms of erosion conditions, water quality, flood and sediment damage and water requirements
- b) Erosion condition and trend--determined by estimating conditions that may be expected to result within 15 years if present land use and management (development) intensity are continued without treatment. Identify causes of erosion and the effect on water quality and flood and sediment damage.
- c) Water uses--current annual amount of water used for specific watershed program purposes. Include water used for revegetation.
- d) Water rights issues

- e) Problems--indicate areas requiring studies or investigations, such as soil inventories, hydrologic surveys, flood and sediment damage surveys, and research.
- f) Watershed opportunities--Consider all technologically feasible management and treatment opportunities to attain the following objectives: stabilization of soil resources, protection and enhancement of water quality, enhancement of water yield and reduction of flood and sediment damages. Identify courses of action to prevent future erosion in areas with severe erosion susceptibility. Consider constraints on construction or development for protection of areas from future erosion damage. Identify all opportunities to reduce present erosion.

MANAGEMENT FRAMEWORK PLANS

- A) Identify land-use objectives for each resource category (energy minerals, non-energy minerals, rangelands, etc.). Develop tentative objectives for each resource without considering other resource development programs or conflicts among activities.
- B) Modify tentative objectives in terms of tribal development policy.
- C) Modify and further refine development objectives considering tribal values, critical environmental areas, resource development conflicts and problems and issues identified relative to each resource.
- D) Develop final objectives.
- E) Develop rationales for each objective.

OVERVIEW

- 1) Identify (in broad terms) critical land use and resource management issues and problems expected to impact the reservation in the near future.
- 2) Determine priority areas.
- 3) Identify critical issues and problems for priority areas in specific terms
- 4) Identify major socioeconomic and environmental issues and problems.
- 5) Assess overall planning information requirements.
- 6) Identify sources of data and information.
- 7) Organize into a planning system format (forms)